

# SCAN

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## EPC/RFID Arrives! New Zealand's first major roll-out

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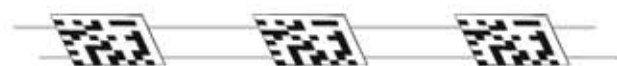
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## CHIEF EXECUTIVE'S COMMENT

### Global changes in GS1 with local impact

New Zealanders know that they are either the beginning or the end of very long supply chains. For this reason, it is self-evident that decisions taken internationally will have relevance for us. With many decisions, we Kiwis are often comfortable to sit back and be "decision takers". At other times though, we are very good at getting involved to ensure that our views are heard and, hopefully, acted on.

When it comes to GS1 standards development, I'm pleased to say that key New Zealanders are making a significant contribution. We need to acknowledge Kiwis like Roger Nickerson from Mitre 10, Elizabeth Plant from Taranaki District Health Board, Brendon Somerville from Aperio Filmpac and many others. They are taking part in the Global Standards Management Process or the GS1 Healthcare User Group, and so providing vital feedback on draft standards and thorny supply chain issues.

But it is not just international standards development that is impacting on this country. At the recent GS1 Global Forum in Brussels, four projects of top priority were announced, each with substantial impact on us in the future.

GS1 New Zealand is, of course, a member owned and governed organisation. We are also a member of the GS1 Global network and this, in effect, means we have a license to operate the GS1 System in New Zealand. In doing so, we have certain rights and obligations to the global community. The rights include setting our own fee structures for New Zealand members and deciding where resources should be applied in New Zealand's best interests (for example, our fees are much lower than elsewhere - including Australia!) The obligations include protecting the integrity of the numbering system and paying "tax" (currently 7.5% of gross turnover) to the GS1 Global organisation for its standards development and other international initiatives.

The four major projects unveiled in Brussels have potential to change the relationship between GS1 New Zealand (and other member organisations) and GS1 Global. In conceptual terms, the four are:

- 1 "Where to Play". This project will identify exactly where the GS1 System should be developed and applied. In what sectors and types of technologies should we "play"? There are, after all, a myriad of opportunities!
- 2 "Organisational Structure". This project will look at current organisational structures, including GS1 Global Office, EPCglobal and GDSN Inc, and their governance framework. It will propose ways of ensuring the global organisation is responsive to members' needs and able to make good decisions.
- 3 "Global Office - Member Organisation Relationships". This project will redefine the relationships and responsibilities of the Global Office (GO) and of member organisations (MOs), like GS1 New Zealand. Although it is intended that MOs will keep all current structures and functions, and the GO likewise, the project is likely to produce a push for General Assembly decisions to become more enforceable around the world.
- 4 "Sustainable Financial Model". Led by McKinsey & Co, this project will define a financial model to fund work in new sectors and technologies, and the financial relationship between the GO, the MOs and the latter's licensee members.

Clearly, the projects could have a major impact on the framework within which GS1 New Zealand works. As members of GS1 New Zealand, you can be assured that the Board and management of this particular MO are well engaged and contributing on your behalf.

We believe those projects are generally good for this country and your interests in particular. That GS1 becomes more cohesive globally with a strong organisation at the centre is highly desirable. The Chairman and I will keep you informed of developments.

Dr Peter Stevens  
CHIEF EXECUTIVE

SCAN magazine is produced quarterly for the benefit of GS1 New Zealand members. It has a circulation of approximately 5,700 readers throughout the country as well as 101 GS1 member organisations worldwide.

SCAN reaches decision-makers in a wide range of industry sectors including grocery, FMCG, healthcare, logistics, manufacturing, retailing, wholesaling and transport. Our readership includes chief executives, sales and marketing managers, account managers, brand and product managers, IT personnel, operations managers, production managers, logistics and supply chain personnel, bar coding staff and packaging coordinators.

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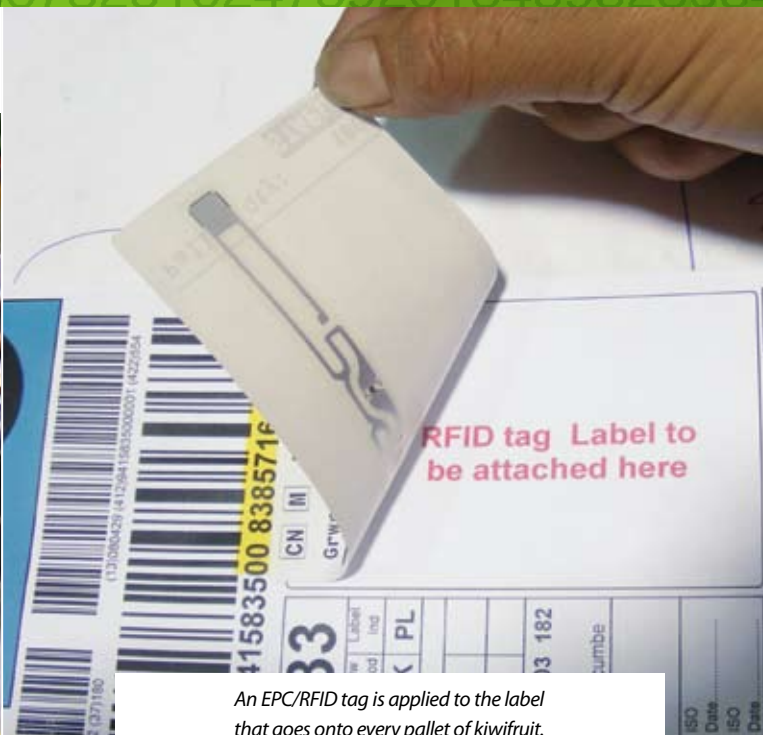
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Pallets are put together as fruit comes off the sorting and packing lines.



An EPC/RFID tag is applied to the label that goes onto every pallet of kiwifruit.



The EPC/RFID reader and antenna are mounted on the forklift's backrest.

# EPC/RFID ARRIVES!

## NEW ZEALAND'S FIRST MAJOR ROLL-OUT

New Zealand's first major commercial roll-out of radio frequency identification (RFID) on the Electronic Product Code (EPC) standard is well underway within the kiwifruit industry.

GS1 New Zealand, through its Supply Chain Enhancement Programme, has designed and, given close ongoing support to the implementation of a system that will enable EastPack to track and trace every pallet of kiwifruit throughout its extensive Bay of Plenty operations.

This is likely to be the first whole-of-operation application of EPC/RFID technology in the Asia-Pacific region. It is certainly an application designed and implemented specifically to meet the demands of a large-scale operation in the heart of New Zealand's export sector.

Each year, EastPack sorts, packs, stores and forwards to export a significant share of the nation's \$1 billion-plus kiwifruit crop. This pack house and others must respond constantly to international market signals received through the industry's exporting arm,

ZESPRI. It's a supply chain with major logistical challenges that reflect the competitive market positioning of New Zealand kiwifruit, a critical focus on product quality, and the scale and structure of this industry.

EastPack turned to GS1 New Zealand for innovation that would enable the pack house to deliver export shipments with even greater efficiency, to reduce its fruit losses and to raise its operational productivity.

EPC/RFID went live at EastPack in late March, from the start of the 2008 kiwifruit season. SCAN reports on the logistical challenges that have made this the first industry for major application of the technology in our part of the world and on the solution developed specifically for EastPack.



### LOGISTICAL CHALLENGES

For Edgecumbe-based EastPack, export market signals hit the tightly-packed lanes of its 42 cool stores most days of the season. From late March, the company receives the freshly-picked kiwifruit for sorting, packing and temperature controlled storage in readiness for trucking to ships berthed at Tauranga. EastPack's Te Puke pack house is the biggest such facility in the industry, expected to handle 9 million trays this season.

Fruit coming off the sorting lines is packed by type, size, grade and harvest date on pallets before going into cool stores, sometimes for months on end. Through the season, the pack houses respond constantly to market orders from ZESPRI – orders that give 10 days' notice of the next shipment but may repeatedly change in detail until just a few hours before product is due on the wharf. (The fruit is owned by growers but in the custody of pack house operators until physically stowed on the ship, from which point ZESPRI takes ownership).

#### Flexibility

Flexibility in filling orders is what helps make New Zealand so competitive on the international market – but it must be matched by extraordinary operational flexibility between orchard and ship. "Everyone in the supply chain has got to do their part to make it happen," says EastPack Company Administrator Donna Smit. "For pack houses, the logistical issues can be nightmarish."

In the EastPack cool stores, the pallets (each with up to 200 trays) are typically stacked in rows 12 long and two high. Pallets are moved in, around and out again as product is selected and accessed for exporting – and at Te Puke in the height of the season, that can mean 24 forklifts at work during three shifts over each 24 hour period.

The kiwifruit must, of course, be kept in the correct cool temperature range all the time. Ideally, pallets move in and out of storage on a first-in/first-out basis, with softer fruit being taken for export ahead of harder fruit (and spoilage minimised). But the flow of orders and constant updating of type, size and packaging requirements invariably disrupts the ideal. Some pallets must be urgently retrieved, with others pulled aside and relocated in the process. EastPack makes a final check on product quality at the truck loading dock and Mrs Smit says this can mean further juggling as sub-standard fruit is removed and new trays added to these pallets.

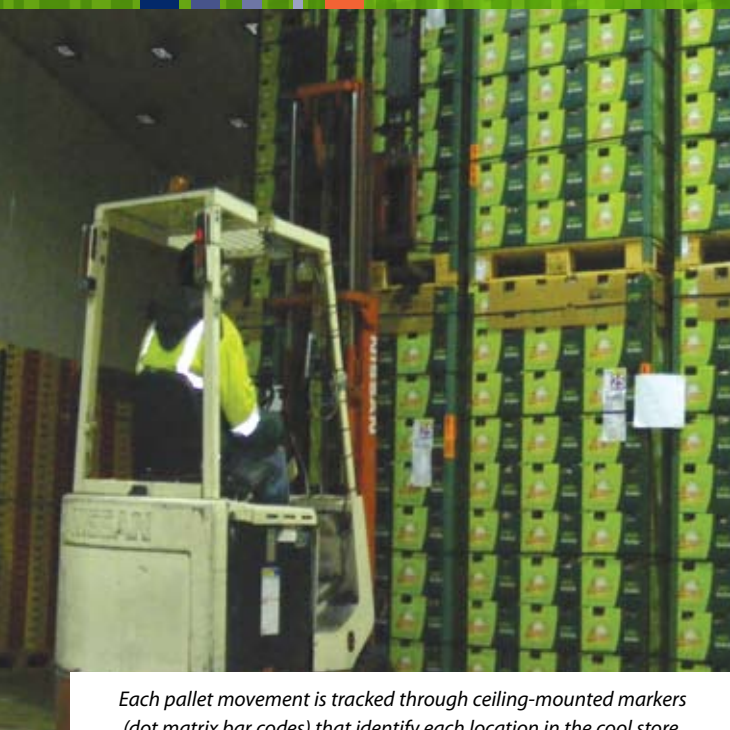
#### Incentives

Keeping both inventory records and pallet locations up to date is critical – but when the squeeze is on, the task becomes extremely difficult. "It really is a case of us growing too fast for our existing systems and people," says Mrs Smit.

For EastPack, there are obvious financial incentives in increasing efficiency in cool store operations: easy and quick retrieval of fruit to the exact specifications of each order means higher sales volume and lower wastage; fewer forklift movements mean less likelihood of fruit being "lost" within the store, and lower requirements for both energy and labour; less juggling of pallets means more stable temperature control, with less energy consumption and fruit spoilage.

In all, EastPack will be better positioned to fill the more urgent and lucrative orders coming through from ZESPRI, and to avoid the penalties that apply when pack houses inadvertently send the wrong kiwifruit to the wharf or, on rare occasions, leave empty spaces in departing ships.





Each pallet movement is tracked through ceiling-mounted markers (dot matrix bar codes) that identify each location in the cool store.



Ceiling-mounted markers, viewed from the forklift.



Pallets of green kiwifruit in cool storage, awaiting export.

## THE SOLUTION

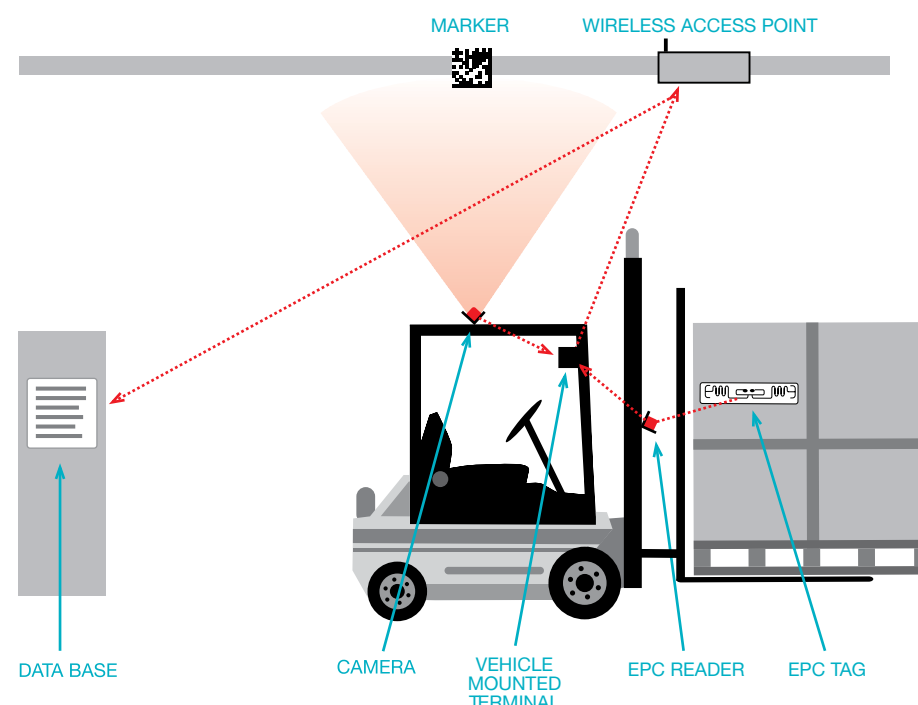
EastPack saw big potential for automatic data capture and came to GS1 New Zealand for ideas in early 2007.

The pack house had long used bar code scanning to identify and track pallets, but it was very aware of inherent limitations when demands of the export season really hit. Staff just could not devote the time and rigor required to scan and record every pallet movement. Enter the GS1 New Zealand professional Services team and its successful Supply Chain Enhancement Programme.

On request from EastPack, Senior Consultant Erik Sundermann immersed himself in cool store operations. GS1 then came back with a proposed solution that would build on the company's experience with GS1-standard serial shipping container codes (SSCCs) and bar coding, and support the existing inventory management system. With his professional support, EastPack put out a request for proposal (RFP) to source the components for robust application of RFID throughout its facilities.

### Providers

Providers were selected in August 2007, with Peacock Bros. of Australia and New Zealand appointed to the role of project integrator (GS1 New Zealand was retained to provide close technical advice and project overview). In broad terms, the



solution is simple: place EPC/RFID tags on pallets and EPC/RFID readers on forklifts; capture events automatically whenever a forklift picks up or drops off a pallet; identify where in the store this occurs; and instantly transmit the relevant data back to EastPack's inventory management system.

At any early stage, the project team experimented with a prototype solution that involved a forklift moving pallets between a limited number of locations in one store. Success led to a fully-operational pilot throughout one store last October-November, the forklifts then operated by staff in the business-as-usual rush to locate pallets and fill orders. Locations around the store were tracked through the use

of forklift-mounted cameras and special location markers (dot matrix bar codes) attached to the ceiling: the cameras recorded the location each time a pallet was picked up or dropped off. That was matched to cool store coordinates (room, row, height and position) fixed on a floor grid pattern; and this data, along with the SSCC of the relevant pallet and a time-stamp, was transmitted back to the management system.

### Roll-out

The pilot results were impressive. The accuracy rate for data capture in the management system exceeded 95% and the ceiling-mounted markers enabled pallets to be identified to within 20cm of their exact locations (the grid pattern is also painted on the floor). From there, EastPack and its project team began a full-scale roll out of EPC/RFID at all 42 stores on the company's three sites –all with the goal of full implementation in time for the 2008 season (starting in the final week of March).

The value of the solution lies, of course, in EastPack's vastly improved ability to locate particular pallets in store, and to quickly retrieve them for export at optimum times and with minimum reshuffling of other pallets. The management system already holds data on all fruit received for packing (eg. type, grower, harvest date) – and the system will now also hold real-time information on the location and status of that fruit by pallet SSCC.

### Powerful tool

Mrs Smit says the EPC/RFID solution gives EastPack a powerful tool for streamlining every aspect of its cool store operations over time, with all the financial advantages mentioned earlier. The company will have a full history of each pallet – time

spent in various locations of a particular coolstore, at certain temperatures and so on – and this will greatly increase its ability to track and trace product. The solution will also provide new streams of data on forklift movements, coolstore utilisation and other variables on which to measure and improve the operating performance of each facility. This will open the way for savings in energy consumption, labour and time. There will also be benefits in terms of enhanced safety for staff working in a busy, crowded environment.

Time is often the most critical element of all for EastPack. When fruit can be accessed and moved with greater certainty and speed, the company can far more easily manage the risk of its deterioration and loss. All parties expect the EPC/RFID solution will lead, ultimately, to reduced fruit loss, increased sales, cost savings and the avoidance of any missed-shipment penalties. Even with conservative assumptions, EastPack anticipates recovery of the capital costs during the first two years of implementation.

"We thought RFID was the way forward but couldn't have moved so quickly and so effectively without the knowledge and drive provided by Erik Sundermann," says Mrs Smit. "He gave us an immediate '101' understanding of the technology and very quickly wrote us a report explaining how it could work in our business."

The EastPack solution will mean ZESPRI receiving 15% of its product with GS1-standard EPC/RFID tags attached. The globally standard nature of this technology will open opportunities for wider application in the New Zealand kiwifruit supply chain, from grower to the supermarkets of New York, Paris and Tokyo. EPC/RFID has arrived!





## Grocery bar codes - Positive news from the check-out

Bar code point-of-sale scanning performance in New Zealand supermarkets has greatly improved over recent years, with grocery operators and suppliers really getting the message on GS1 standards. That is the picture emerging from a November 2007 survey of bar code scanning on typical trolley loads of grocery items purchased at two Wellington supermarkets.

### Survey

GS1 New Zealand organised the check-out level survey as a follow-up to similar research undertaken in 2001 – and the results indicate that bar code quality improvement initiatives taken by retailers, suppliers and GS1 have benefited everyone, including consumers. Scanning problems – either a bar code did not scan at all or it scanned only with difficulty – occurred on only 0.2% of all grocery items in 8,311 trolleys arriving at 33 check-out lanes during the latest survey period. This compared with a 6.2% incidence of scanning problems in the 2001 research. The proportion of trolleys in which some items had scanning problems fell from 35% in 2001 to only 2.5% in 2007.

The incidence of a bar code not scanning at all was just 0.08% (0.6% in 2001) while 0.12% of the bar codes required two or more scans (5.6% in 2001).

Survey leader Owen Dance, Senior GS1 Technical Consultant, says it was a typical shopping day although the results are obviously only indicative of experience elsewhere. Mr Dance says where problems did occur, they were with the way bar codes were designed and/or printed, or with how they were presented for scanning, and not with the scanning equipment itself.

The 2007 survey provides further evidence that the New Zealand grocery sector is among the best in the world for bar code quality. A similar survey in French supermarkets last year showed a 1.9% incidence of problems, affecting 21.2% of all trolley-loads of items included in the scanning sample.

### Focus

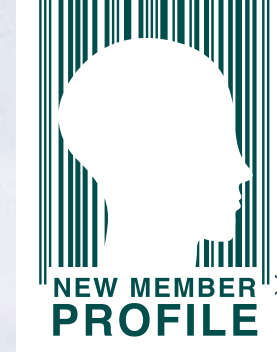
GS1 New Zealand Chief Executive Peter Stevens says increased focus on bar code quality in the grocery sector has been paying off. "Fewer scanning problems means greater efficiency in key areas of supermarket operations," he says. "When a bar code doesn't scan at point-of-sale, the check-out operator has to stop and manually key-in the sale. The delay might seem trivial but multiply it by millions of items each year, and you can see a substantial loss of time arising from scanning problems. There is also the heightened risk of inaccurate or incomplete recording of sales."

### Programme

Dr Stevens says the grocery sector has embraced the benefits of fewer scanning problems through the GS1 Accreditation Programme for suppliers and through mandatory reporting on the verification of bar code quality when new products are being introduced for supermarket sale. The programme formally recognises suppliers – largely printing and packaging firms in this instance – who demonstrate compliance with GS1 standards. "We now see other sectors taking their lead on bar code quality from grocery," he says.

Ms Brenda Cutress, Executive Director of the New Zealand Food and Grocery Council, says the latest survey results reflect a huge commitment by the suppliers of manufactured products to supermarkets to make supply chains more efficient, in large part through compliance with GS1 standards for bar coding. "The results of this latest survey are most pleasing and they are to the benefit of retailers, suppliers and consumers." These comments are echoed by Melissa Hodd, the Executive Manager of Foodstuffs (NZ) Ltd, who says there has been significant effort by all parties. "It's an example of how the industry is working together to improve the efficiency of the supply chain, to reduce costs and ultimately to provide better service to customers," she says.

See also **GS1 for dummies**, page 15.



## Cracking up on tour

It's official – 11 January is "Laughing Samoans" day in Honolulu! Mayor Mufi Hannemann liked the comedy duo so much that he has added them to the city's calendar. Just another accolade for Eteuati Ete and Tofiga Fepulea'i as they "crack up" audiences from Anchorage, to Perth, to Whakatane.

This year, Ete and Tofiga have another hectic schedule with their latest show, "Crack Me Off". Tickets sold fast for performances around New Zealand, Australia and the United States – and for the first time the Laughing Samoans are also playing London (at the Bloomsbury Theatre on 15 May... if you can make it!)

This year also, Laughing Samoans Limited has become a GS1 member – a move that helps the duo's company expand its distribution and sale of DVDs from past Laughing Samoans shows like "A Small Samoan Wedding" and "Off Work".

"We didn't think we would make it this big but everywhere we go, we're drawing large crowds ... and we're very pleased to be so successful," Ete told SCAN this month, between shows in Hastings and New Plymouth.

The duo's character-based skits are clean, family-friendly humour drawing on personal experiences, and on events they have seen happening around themselves and others. "It's what Australians call 'ethic humour,'" says Ete. "When we started we thought that we'd appeal just to Samoans but in fact, we've found a big following from all kinds of people, of all ages ... it seems to be humour with universal appeal."

It has certainly stood the test of time since 2003. Ete and Tofiga did their first show at the New Zealand Fringe Festival in Wellington in that year. It was called "Laughing with Samoans" – and their name, audience appeal and business activities have grown from there. This year, shows in Auckland, Wellington and various provincial centres have all been sell-outs.

Ete and Tofiga have developed the business side of their comedy performance by paying close attention to touring schedules, publicity and merchandising. In 2007, the success of the Laughing Samoans was recognised when the company won the Pacific Media Network Pacific Business Enterprise of the Year Award in Auckland.

## Certificate GRADUATE

Congratulations to Gyanendra Prasad of Pernod Ricard New Zealand on successfully completing the Certificate in Automatic Data Capture Standards. GS1 New Zealand appreciates the support given to the Certificate Course by Pernod Ricard, the leading wines and spirits group. It currently has five other people also currently enrolled.

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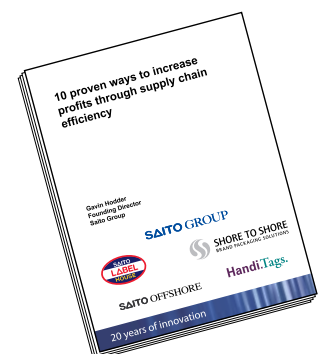
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# Wearing New Zealand

In the “Made in China” age, here’s a very different kind of clothing company. New Zealand Natural Clothing Limited offers leisure, travel and outdoor wear that is designed and produced only in this country. And it boasts the fact with “100% New Zealand Made” branding on retail stores.

The company was formed in late 2007 to acquire six stores that were formerly part of Norsewear – that time-honoured Kiwi brand synonymous with rugged woollen socks and sweaters. New Zealand Natural Clothing Company owners Phil Grant and Julie Hedley are adamant that this country has great manufacturers and raw materials, and customers who want local products of high quality.

“Most casual lifestyle clothing is made to basic block designs with not much change, and what matters is the type of fabric and the quality of the finish,” says Mr Grant. “It’s about fashion up to a certain point but thereafter, comfort and useability.”

This is a perspective shared by a growing stable of New Zealand Natural Clothing suppliers, including Christchurch-based Earth, Sea, Sky Equipment, McKinlays Footwear of Dunedin and Norsewear (for items that are made here). The company also has products made under its own label.

“We always want to work directly with the manufacturers, recognising that they have tight margins and that we all want to keep our prices to our final customers down,” says Mr Grant. He believes quality – in terms of both fabrics and manufacture – as well as “100% New Zealand made” are critical, given the competing volumes of internationally-branded (largely Chinese-made) clothing that is available in the leisure, travel and outdoor category. “Ten percent of consumers are loyal to New Zealand brands. We aim to expand that to 20%,” he says.

Fibre is definitely important to New Zealand Natural Clothing, especially if it’s merino wool and possum fur. Mr Grant says the 100% New Zealand Made stores will increasingly have information and displays on the unique properties of merino, possum and other fibres for clothes that are warm, comfortable and healthy.

The company’s six stores are in Wellington (Lambton Quay), Otaki, Norsewood, Geraldine (South Canterbury), Tirau (Waikato) and Sylvia Park (South Auckland).

Mr Grant says excellent point-of-sale service and inventory management are all part of the New Zealand Natural Clothing business plan – and hence the importance of GS1 standards for identification and automatic data capture.

# Hardware sector data standards

The New Zealand hardware industry has taken another step in confirming the valuable role that GS1 standards can play industry-wide in the sharing of product data between trading partners.

Mitre 10, one of five major hardware retailing groups in this country, is implementing GS1net™ for the continuous sharing of standardised data with its suppliers (see update on page 11). This development is being watched carefully by other industry members, all of them having some suppliers in common.

The Hardware Industry Working Group (HIWG) – a combined New Zealand and Australian group – has a leadership role in monitoring and advising industry participants on information technology. The HIWG’s New Zealand sub group has recently completed an assessment of Mitre 10’s data set, GS1net and its compatibility with other data standards in the industry.

The New Zealand group has found that GS1net is consistent with other systems and processes that are currently in use.

In an industry-wide statement, group chairman Peter Jameson says it is recognised that the data set created by Mitre 10 is a sub-set of the full GS1 data set and of the HIWG’s Pricat data set (ie, the hardware industry-specific Price- Catalogue message system for standardising product data). Mr Jameson says there are some small differences between the Pricat and Mitre 10 data sets, but these differences are now being aligned by the Technical Development Group of the HIWG.

In future, there will be extensions to both data sets so that GS1 and Pricat standards remain compatible in their application to the assembly and sharing of hardware product data, he says.



# Full steam into the challenges of 2008

By Shaun Bosson, General Manager, Professional Services

We are now well and truly into 2008, and it’s full steam ahead for the GS1 Professional Services team on some very significant challenges. Here are a couple that are in front of us now.

## Supply Chain Enhancement Programmes (SCEP)

One of our key projects in this area has definitely reached the “business-end” – installation of the EPC/RFID solution at EastPack (as reported on pages 4-7). We are at go-live with the initial set of functionality across the organisation’s entire operations. This is an important project for EastPack and for GS1 New Zealand – it is one of our first SCEPs to involve EPC as a key part of the solution.

For readers not aware of our SCEP, it generally involves four related but independent phases. We take an organisation from analysis of its business problems and opportunities, through to the definition of appropriate solutions and deployment within its business, or between it and its trading partners.

Our approach to such projects has proved very successful for supporting organisations through the lifecycle of new technology implementation and business process change. GS1 Professional Services is able to leverage its vendor-neutral status and broad multi-industry experience, and thereby remove barriers that often prevent organisations from implementing the right solution for their needs themselves.

## Mitre 10 and GS1net in New Zealand

GS1net™ is, of course, a tool in this country and Australia for supporting the continuous sharing of standardised product master data between trading partners – the process generally called data synchronisation.

Mitre 10 has completed its first phase of integration with the GS1net platform. A lot of the focus now is getting top priority suppliers of Mitre 10 onto GS1net by June 2008. Suppliers are generally positive about the initiative and are confident of being ready in time. However, some other companies are behind schedule and GS1 will be doing all that we can to help them get back on track with the process of becoming GS1net Ready®.

Mitre 10’s decision to use GS1net is extremely positive for the group’s supplier community. Not only will both Mitre 10 and its suppliers reap the benefits of having accurate product data, but the suppliers will be able to leverage their progress into relationships with other trading partners. That is the nature of GS1net as an industry platform: a company can provide accurate data about their products to many customers once they, too, make the transition necessary for data synchronisation. This is far better for all than having a number of point-to-point solutions between suppliers and retailers with added cost.

FOR MORE INFORMATION



For answers to any questions surrounding GS1 Professional services, please call 0800 10 23 56 (option 1).

## Upcoming

### Wine Industry Seminars

GS1 New Zealand will run seminars this July to provide a thorough grounding in the creation and use of bar codes by wine producers and their customers. The seminars will also give insight into the GS1net TM platform for data synchronisation between trading partners and into the GS1 system for wine industry traceability.

#### Seminar details

**Central Otago** – Tuesday 22 July  
Venue: Golden Gate Lodge, 4 Barry Avenue, Cromwell

**Hawkes Bay** – Tuesday 29 July  
Venue: Eastern Institute of Technology, Gloucester Street, Taradale

We are gauging interest in a possible Wairarapa seminar around the same time. If you are interested, please let us know (see over).

### Bar Code Foundation Seminars

**Wellington** – Tuesday, 27 May and 26 August  
GS1 New Zealand Boardroom, Thorndon Quay

**Christchurch** – Wednesday, 28 May and 27 August  
InterGen Offices, Level 2, 158 Hereford St

**Auckland** – Thursday, 29 May and 28 August  
GS1 New Zealand Offices, 485A Rosebank Road, Avondale

#### GS1net™ Foundation Seminars

**Wellington** – Tuesday, 10 June  
GS1 New Zealand Boardroom, Thorndon Quay

**Christchurch** – Wednesday, 11 June  
InterGen Offices, Level 2, 158 Hereford St

**Auckland** – Thursday, 12 June  
GS1 New Zealand Offices, 485A Rosebank Road, Avondale

For more information on all seminars and registration forms, visit [www.gs1nz.org](http://www.gs1nz.org) or contact Pauline Prince on [Pauline.prince@gs1nz.org](mailto:Pauline.prince@gs1nz.org) or tel 04 494 1067



## GS1net and more for Foodstuffs Own Brands

The move to GS1net™ has been a leap ahead for Foodstuffs in more ways than one. Foodstuffs Own Brands Limited (FOBL), the group's own supplier company, has taken the opportunity to radically improve its product development and customer response capabilities using Bizcaps software from EDIS Technologies.

Bizcaps is a package that supports companies through the complexities of product and price data synchronisation for GS1net while, at the same time, enabling them to streamline their own core business processes. That's exactly what FOBL has done in key areas of its operations.

FOBL supplies "Pam's" food products along with a wide range of other products under the Budget, Ideal, Terrian, Universal, Nature's Offer, Zone, Inside and Plantsman brands. Together these exclusive Foodstuffs brands make up around 20% of the packaged items to be found in New World and Pak N' Save supermarkets. As a major Foodstuffs supplier, FOBL was quick to begin the migration of its data onto GS1net. This was no simple matter, however, given the number and diversity of products (approx. 4000) supplied by the company and its existing use of several distinct databases.

### One database

FOBL General Manager Bart Wright says Bizcaps made the transition to GS1net far easier than it would have been. "We built one consolidated database that was GS1 complaint for data synchronisation purposes and could also be the foundation for two other Bizcaps software modules that would strengthen our new product development and customer management processes," says Mr Wright.

### SCM research

New Zealand's first research centre for supply chain management (SCM) is up and running with research streams that include the use of information technology, barriers to SCM improvement and measurement of its business value.

The Centre for Supply Chain Management, officially launched last October, is part of the University of Auckland Business School. It has a mission to "develop and disseminate world-class knowledge and practices in SCM applicable to Australasian economies by fostering cooperation, collaboration and communication among academic researchers, educators and industry practitioners".

Product development occurs continuously as FOBL refines and updates its range by identifying gaps in the market, designing new products, tendering among producers and taking the products out to consumers. Bizcaps has enabled the company to automate its tendering processes from end-to-end, including the analysis of tender responses on relevant criteria and the reporting of outcomes to all parties.

New product information will automatically be gathered in a standardised format for entry onto GS1net at an early stage, by FOBL or the producers themselves. Bizcaps has also enabled the integration of FOBL systems to avoid errors that might arise otherwise from the holding of data on multiple systems. Data can now include digital images of products for use in marketing.

### Flexibility

Mr Wright says the combination of Bizcaps and GS1net makes a big difference to the FOBL business. "We now have standardised product information in a very comprehensive data base that is web-based and therefore accessible from anywhere," he says. "It gives us tremendous flexibility in managing existing products and in the whole process of developing new ones."

Bizcaps was delivered by EDIS Technologies in its role as a specialist supplier of supply chain management systems and of business-to-business EDI solutions for companies in New Zealand's fast-moving consumer goods sector. Bizcaps modules support GS1net databases, product lifecycle management, customer feedback, product pricing, and the management of recipes and ingredients and other customised work flows. Bizcaps has been adopted by hundreds of companies in New Zealand and Australia (for more information, see [www.edis.co.nz](http://www.edis.co.nz)).

The centre's leader, Professor Alan Stenger (and speaker at last year's "Connecting the Dots" conference) predicts that it will accelerate understanding of supply chains in the context of the Australasian economies, and spearhead new ideas and business practices. The centre's research and teaching activities are guided by an Advisory Board consisting of major companies and government organisations, including Healtheries, New Zealand Trade and Enterprise, Telecom, The Warehouse, Toll Tranzlink and Ports of Auckland.

For information, see [www.cscm.auckland.ac.nz](http://www.cscm.auckland.ac.nz)

## No sex please, we're Kiwi



Condoms are no longer sold in plain wrappers but apparently we still prefer discretion when buying them at the local supermarket.

Consumer research suggests a purchase decision time at the condom display of just four seconds, compared with an average 17 seconds across all grocery items. "People don't like to be seen buying them ... they have a quick look and grab the product off the shelf," says Brett Miller, Business Unit Manager Consumer for EBOS Group. The company's Ansell range of condoms and lubricants has significant share of the New Zealand market for these highly personal products, with over 90% of its sales through supermarkets.

Shoppers' reluctance to spend time reading labels and choosing between brands at the condom and lubricant shelf is a particular challenge for marketers. "The packaging has got to be right so people can recognise it at a glance, and good packaging includes the right bar code with correct data and the ability to scan quickly every time," says Mr Miller. Delays at point-of-sale are not likely to be appreciated by discrete shoppers.

EBOS regularly uses the GS1 New Zealand verification service to ensure the quality of bar codes on new products soon to be offered through supermarkets. And Mr Miller says the Lifestyle and Contempo ranges are regularly

updated with new niche products and variations in packaging.

In fact, most of the market is for regular types of condom, purchased routinely by couples. "Growth in sales will come largely from getting new people into the market with products that have particular appeal to them," says Mr Miller. Features include differences in colour, texture and size. EBOS has had recent success, for example, with its "Contempo Rough Rider" product, aimed largely at the 18 to 25 year-old male market.

The company is also making good progress with its range of lubricants, a category with double digit growth. Demand for these products tracks that for condoms, says Mr Miller, but it is also growing as a reflection of New Zealand's aging-yet-still-very-active population.

EBOS puts much effort into monitoring sales, and analysing the condom and lubricant market – and high-quality bar coding helps ensure a flow of correct data to stimulate these activities.



CODE VERIFIED



### Harness the Potential of World Class RFID

New Zealand businesses should see RFID as a reliable tool to generate new efficiencies for their customers. For more information contact Andrew Tubb at IBM on 09 359 8623 or [andrew.r.tubb@nz.ibm.com](mailto:andrew.r.tubb@nz.ibm.com).

Whether you are looking to RFID to track stock through the supply chain, gain enhanced visibility or real-time location of valuable assets, the IBM and OATSystems partnership delivers compelling business benefits and ROI.

Since 2005, OATSystems and IBM have offered integrated solutions to provide retailers and their manufacturing partners with the ability to gain more visibility and mine real-time data within the supply chain. By analysing the data captured we can deliver a record of inventory and goods moving across the supply chain.

Through OATSystems' RFID applications and IBM's RFID infrastructure software, in conjunction with strategic input on business case development and system design, customers globally are already reaping significant benefits.

Retailers behind the drive for RFID are aiming for improved stock levels in stores and ultimately increasing sales.

One of South America's largest retailers is using an RFID solution to track over 7000 apparel products in its department stores. Its initial pilot was developed by IBM, using OATSystems Foundation Suite middleware platform, interrogators from Motorola and RFID hangtags by Paxar. The project resulted in 98.4 percent inventory accuracy and enabled staff to count up to 9000 items in one hour. In addition, the retailer experienced a 25 percent reduction in out-of-stock occurrences of RFID-tagged items.



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## Label & Track, New Zealand's Next Big Success Story

With an increasing number of New Zealand companies beginning to actively explore the realm of RFID, Sato New Zealand is well placed to offer excellent advice to those wishing to consider the possibilities of this much talked about technology. Already leaders in the field of traceability with their product Label and Track, Sato offers a comprehensive range of RFID products, from RFID enabled printers to RFID tags and readers, while their world class expertise and highly qualified technicians are superbly equipped to advise on all matters RFID. In addition to this, Sato works closely with partners and industry leaders like UPM Rapsac, Infineon, SAMSys and EPCglobal to provide total RFID Solutions that are compliant with ISO and EPC standards.

An outstanding example of Sato's leadership in the field of RFID is their proprietary FlagTagSolution™. Developed by Sato, it is the perfect solution to a common drawback of RFID; radio waves are sometimes subjected to interference from metals, liquid products and packaging. The FlagTagSolution™ is field-proven to be readable even with metals and liquids interference. It is designed to be used with the SATO CL4e Series On-Demand RFID printer as well as Sato's S-Type print engine for automatic print-and-apply applications. Sato's FlagTagSolution™ can be used on pallets, cases, metal drums, liquids or aluminium cans.

Globally Sato has implemented RFID solutions for such companies as Nestle and METRO Group, and is set to continue its RFID leadership in the New Zealand market.

Be it Compliance Labelling, Warehouse Logistics, Access Control, Asset Tracking, Baggage Tagging, Retail Tagging or Product Traceability, Sato has the answers to your RFID needs!

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## Standards for healthcare

Progress on global standards development for healthcare will be reviewed at another major GS1 Healthcare Conference in Toronto on 17-19 June. This will be the next gathering of the GS1 Healthcare User Group (GS1 HUG™), a very active network of health authorities, associations, pharmaceutical and medical supplies companies who work with GS1 on the effective development and use of global standards with a primary focus on automatic identification to improve patient safety.

The GS1 HUG has a full agenda that includes: Rules for allocating GTINS (Global Trade Identification Numbers) to pharmaceuticals and medical items under different circumstances or changes in product status or identification; definition of the data required for automatic identification with patient safety as the first priority; and definition of serialisation schemes for healthcare products. A number of these projects are nearly completed.

The GS1 HUG has set up working groups to develop global standards for application to all forms of data carrier, and for use in the packaging or direct marking aspects of automatic identification and data capture (AIDC) systems. Other projects are beginning with a focus on data synchronisation and healthcare product traceability. The Toronto conference will build on earlier such gatherings in England last October and Spain this February.

GS1 HUG members are closely watching developments at the Federal Drug Administration (FDA) in the United States which recently issued a request for information on unique identification systems for medical devices. The FDA is an active member of the GS1 HUG.

## WCO Work

GS1 Global is working with the World Customs Organisation (WCO) for the future use of GS1 standards in WCO initiatives to facilitate international trade and strengthen security within global supply chains.

The two organisations signed a memorandum of understanding in late 2007. WCO Secretary-General Michel Danet, speaking at the GS1 Global Forum in February 2008, has asked for GS1 help in meeting the challenges faced by his 171 member Customs authorities worldwide. Security has become a major priority for the WCO given the increased threat of terrorism.

GS1 and WCO, and various of their members, have completed a pilot project on the use of the GS1 Serial Shipping Container Code (SSCC) as an identification key for giving practical effect to the WCO's Unique Consignment Reference (UCR) programme.

The pilot has proved that SSCCs can be used as an "electronic staple" between all elements of a supply chain for the purposes of providing Customs authorities with the information they need. Using the SSCC as, in effect, the UCR can reduce compliance costs, improve traceability and enhance security. There is now wide acknowledgement that extending the use of SSCCs for Customs purposes is more sensible than creating a new numbering sequence. Work will continue on the adaptation of various parts of the GS1 System for use within the WCO framework, with more pilot projects planned.

GLOBAL NEWS >

# GS1 for dummies

Often it all comes down to the quality of printed bar codes. The GS1 System may be carefully integrated into a supply chain or retail environment but the benefits will slip away if bar codes do not scan correctly when it counts! Here we look at the critical factors in bar code quality.



### What is bar code quality?

Quality is about the "scannability" of a bar code and the accuracy of information contained. Can it be read by a scanner first time, every time? The scanner must be able to recognise the bars and spaces, and identify the characters they represent so these can be automatically decoded. Of course, the information encoded and then decoded must be accurate for bar coding to be of use at all!

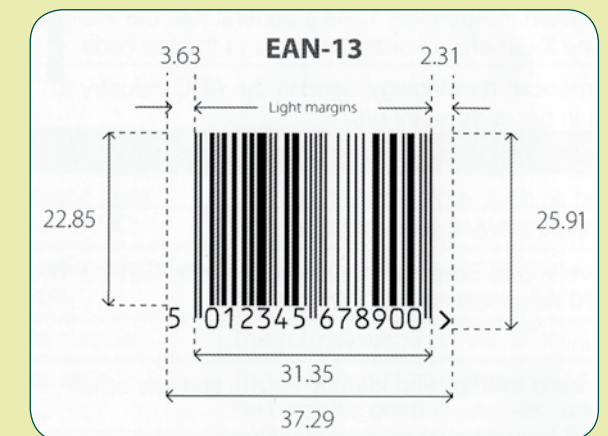


### What determines quality?

Good quality really begins with ensuring the data is correct. It pays to double check that the numbers used in creating bar codes are, in fact, the numbers of the items that will bear those bar codes (and that the numbers are correctly structured). Bar code dimensions come next – they must be correct! The size of a bar code can be varied according to the area available for its application and, in the case of a GS1-128 bar code, the amount of data to be encoded. But whatever the bar code size, the dimensions of its bars and spaces and of the whole must be in correct proportion to each other.

Each type of bar code has a set of GS1-specified nominal dimensions – height, width (with and without "light margins"), and width of the bars and spaces. Varying the size of the bar code is a matter of varying its dimensions up or down from the nominal by some magnification factor. For example, the nominal height of an EAN-13 bar code is 25.91mm. On a magnification factor of 110, this height becomes 28.50mm, and the width (light margins included) will move up in proportion from 37.29mm to 41.02mm. Light margins are clear spaces to the left and right of the bar code – and as a general rule, a light margin must be 10 times the "x-dimension" of the bars or spaces in that particular bar code.

X-dimensions specify the width of bars and spaces. An EAN-13 bar code has a nominal x-dimension of 0.330mm and when a magnification factor of 110 is applied, this becomes 0.363mm. X-dimension is the width of the thinnest bars and spaces in each bar code: all bars and spaces in the same bar code must be exactly one, two, three or four times the x-dimension. If any of these dimensions are wrong, a scanner will not be able to recognise the bars and spaces, and pick up the characters they represent.



### How does colour affect bar code quality?

Colour is also extremely important. Because scanners use red light, they can only pick up certain colour combinations that have sufficient contrast. For example, black bars and red spaces work: red bars and yellow spaces do not. Beware of product colour that shows through packaging – it can change the bar code colours.



### What other things impact on quality?

Bar codes must be printed clearly – no blurred edges or smudging of ink, no light spots which should be dark and so on. How and where labels are attached to items can also be critical. If the surface is uneven or broken, bar code dimensions and reflective attributes may be rendered incorrect. Similarly when bar codes printed on packaging become stretched, buckled or distorted in any way. Obviously, they mustn't become obscured by tape or extra wrapping material. There are many things that can suddenly make a perfectly created and printed bar code unscannable!

For detail on bar code dimensions and colour specifications see [www.gs1nz.org](http://www.gs1nz.org) under Products & Solutions/Barcodes.





New Zealand

# Questions? Please contact the GS1 New Zealand team

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Rena is the "meet and greet" point of contact for members either calling, emailing or visiting our Wellington office.

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